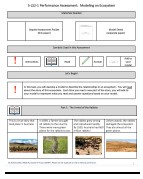
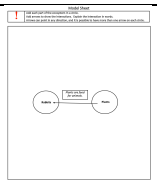
Modeling rabbits and the movement of matter
Short Performance Assessment

Materials Needed

	Stapled Assessment Packet (this paper)
	Model Sheet (separate paper)

Instructions Used in this Assessment

!	Instructions		Read		Answer		Add to your model

Let's Begin!

!	In this task, you will develop a model that will help you describe the relationships between parts of an ecosystem. You will read a story about this ecosystem. We started a model of the ecosystem for you on the separate model sheet. Each time you read a new part of the story, you will add new information to the model. Then, you will use the model to help you answer questions.

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Part 1: The Australian Ecosystem

This is a true story that took place in Australia.	The Australian ecosystem had open spaces with small hills covered with plants, such as grass and trees.	One animal in this ecosystem was the kangaroo. Kangaroos eat different kinds of plants.
		

!	Find the model sheet. We have started the model for you by showing two parts of the ecosystem, the kangaroos and the plants. The arrow indicates how matter moves from the plants to the kangaroos.

1	Describe how matter moves from plants to kangaroos in this ecosystem.

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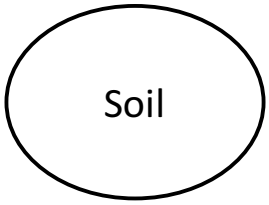
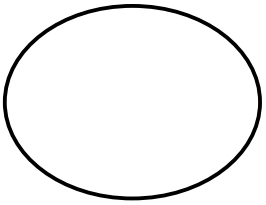
2a	One **non-living thing** that plants need in order to grow is soil. Write one more **non-living thing** that plants need in order to grow in the second circle below.





 2b	○ Add **both non-living things** to your model on the Model Sheet. ○ Draw arrows to show how matter moves between the non-living things and the rest of the ecosystem. (Hint: Arrows can point in any direction, and it is possible to have more than one arrow on each circle.)

2c	Describe how matter moves from the **non-living things** to the **kangaroo** in this ecosystem. Use specific examples from your model to explain your ideas.

Part 2: Introduction of the Rabbits

In 1859, a farmer brought 24 rabbits to Australia. There were many green plants for the rabbits to eat.	The rabbits grew strong and reproduced rapidly. By 1950, Australia had 600 million rabbits!	Unfortunately, the rabbits damaged the ecosystem. They ate almost all the green plants.
		

3a

- Add the **rabbits** to your model sheet.
- Draw one or more arrows to show how matter moves between rabbits and other parts of the ecosystem.

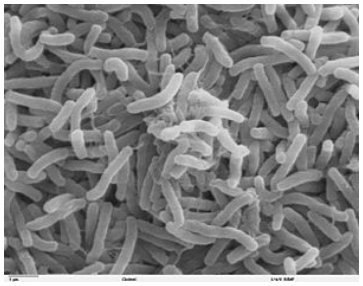
3b

Why do you think many **plants** could not survive after **rabbits** were introduced to the ecosystem?

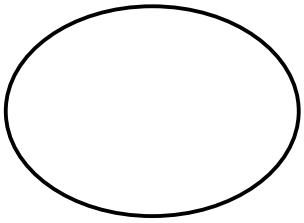
4

Describe how the **rabbits** made the whole ecosystem weaker. Use what you know about ecosystems and examples from your model to support your reasoning.

Part 3: Scientists Reduce the Rabbit Population

Scientists decided to try to lower the number of rabbits by releasing a disease into their environment.	The disease killed many of the rabbits. But the dead rabbits created problems for the environment.	There were many dead rabbits, but eventually decomposers cleaned them up.
		

5a Write the name of a **decomposer** in the circle below.



5b
- Add the **decomposer** to your model.
- Draw one or more arrows to show how matter moves between the decomposers and other parts of the ecosystem.

5c This ecosystem would not survive without the decomposers. Describe how decomposers cleaning up the dead rabbits made the whole ecosystem stronger.

Model Sheet

!	Add each part of the ecosystem in a circle. Add arrows to show the interactions. Arrows can point in any direction, and it is possible to have more than one arrow on each circle.